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ABSTRACT

This report of a symposium on general education was written to guide future discussion and action concerning the content of general education. Topics covered include: (1) responsibility for educating the young; (2) priorities in determining the content of general education in the areas of science, technology, the environment, society, language, community, and culture; (3) preparing students for the world of work; (4) strengthening values and aptitudes; and (5) developing appropriate learning experiences according to changes in society. Specific proposals are offered on the role of national governments in education, and on supportive activities by the United Nations Educational, Scientific, and Cultural Organization (UNESCO). In the second section, a report is given on the background and objectives of the symposium. A summary of the proceedings is included. Appendices contain a synopsis of the main preparatory documents, a list of documents distributed, the opening and closing addresses, a selective bibliography of documents and publications on educational content; and a list of participants. (JD)

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UNITED NATIONS EDUCATIONAL,
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INTERNATIONAL SYMPOSIUM ON THE EVOLUTION OF THE CONTENT OF GENERAL EDUCATION OVER THE NEXT TWO DECADES

(Paris, Unesco, 7-11 July 1980)

FINAL REPORT

U.S. DEPARTMENT OF EDUCATION
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I. ITEMS ADOPTED BY THE SYMPOSIUM TO GUIDE FUTURE DISCUSSION AND ACTION CONCERNING THE CONTENT OF GENERAL EDUCATION

A. Fundamental principles

1. Nobody should be deprived of education; it should not be reserved for privileged groups, as in the past. Inequality of access to education is attributable to administrative decisions, curriculum content and the language of instruction.

2. Educational action for the benefit of children is a long-term investment, for they will not occupy positions of responsibility until 15 to 25 years have elapsed. The decisions that will shape the immediate future must be taken by the adults of today; in other words, we must make a special effort now about the education of young people and adults.

3. Vocational or hierarchical forms of discrimination are real obstacles to the attainment of lifelong education for all.

4. Outside the confines of the school, many different forces exert an influence in modern societies. Any reform in education must make use of those forces, especially the mass media, so as to integrate them harmoniously, and in co-operation with the school, into a rationally planned programme for education.

5. The decade now beginning is a crucial one for the survival of the world's peoples. Education should make young people aware of the problems of development and the existence of imbalances in food distribution and also of the problems of population, energy resources and the environment. Educational curricula should therefore develop the pupils' ability to foresee new situations and not merely to adjust to those which they already know, while at the same time developing their tolerance and their ability to appreciate other cultures and beliefs.

B. Priorities to be adopted in determining the content of general education: science, technology and the environment

6. If national socio-economic objectives are to be achieved, the role of science and technology in general education must be reviewed. Science teaching should be based on fundamental concepts; science should be taught as an organic whole; emphasis should be placed on methods and on the practical applications of science; the basic sciences should be more directly linked with what takes place in everyday life, and in particular with the natural and technological environment.

7. Mathematics should be an important part of an all-round education, and should be taught both for its usefulness and for its intrinsic value.

8. The study of statistics should begin as soon as the child is capable of understanding its rudiments, and should grow more complex as the pupil progresses. The role of probability should be given greater emphasis, and this concept should be dealt with in a way that relates it to everyday life (games, weather forecasts, accidents, health risks, etc.).

9. The teaching of natural sciences should help pupils to understand more about the environment and greater prominence should be given to health problems.

C. Priorities to be adopted in determining the content of general education: society, language, community and culture

10. The use and study of the mother tongue of both pupils and teacher, should be given absolute priority, especially in the early days of schooling; but the teaching of the major international languages of communication should not be neglected.

11. Too often, the school knows nothing about the language of the media, in which words, sounds and images are interfused. The best way of training pupils in this new form of communication is to teach them to speak, read and write its language. It is therefore important that children and adults should be trained in the critical appreciation and the creative use of audio-visual language. The curricula should also include a grounding in communication theory, together with an introduction to the concept of information and to the techniques now used in this field.

12. Information is not knowledge. In view of the growing volume of information of all kinds and from all parts of the world, and its atomization, education should place emphasis on the development of conceptual codes of reference and codes of interpretation designed to facilitate the mastery and assimilation of information.

13. Universal history, as taught hitherto, has been merely history presented from the European point of view. Curricula should be broadened to include a cultural and socio-economic history of the world, so that pupils can grasp both the diversity of cultures and the oneness of human experience, and also understand the historical process that has produced the problems of the present day. History textbooks should be revised accordingly.

14. Often, too, a general education is not well-balanced. Physical education and sport, on the one hand, and education in the arts on the other, are indispensable to each pupil's development, his interest in the world and his growing awareness of his cultural identity.

D. Preparation for the world of work

15. An effort should be made by all concerned to link the school with the world of work and, conversely, the world of work with the school. The educational opportunities afforded by the world of work, in regard to both technological skills and mental attitudes, should be used so that young people will be better prepared for a balanced occupational career. Action to encourage new relations between education and work should be the outcome of participation in decision-making by all the parties concerned, and especially by pupils, workers and families. If action is taken in this way it could help to guide the pupils and facilitate their choice.

16. From the earliest years, the educational process should aim to transcend the dichotomy between manual work and intellectual activity, and above all to get rid of the prejudice against manual labour that still exists in the great majority of societies.

17. In order to enable both women and men to have a career, preparation for the sharing of household tasks should be introduced into the curricula and distinctions between the sexes in the matter of where manual work and home economics should be abolished.

18. The introduction of productive work into general education calls for a reform of policies for the recruitment and training of educational staff (use of non-teachers as educators, contribution of workers to educational activities, and life-long education for all).

19. Lastly, fresh studies of experiments in the combination of productive work with schooling should be made with a view to assessment, and more accounts of them should be published.

E. Values and aptitudes

20. In order that an all-round education may help to prevent civil strife and war and to establish peace, harmony and social justice in the world community, teaching on justice, freedom and respect for fundamental rights, a sense of duty and responsibility, social balance - in short, everything that makes for the quality of life - should be provided as a value of the utmost importance, inseparable from the world view that should be developed in each pupil.

21. Honesty, the spirit of service, perseverance, humour, loyalty and integrity are other good qualities that an all-round education should obviously encourage in each pupil.

22. Young people must be trained to be attentive to the views of others and to accept differences, so that they may make an objective attempt to engage in a constructive and supportive dialogue in a spirit of mutual tolerance and respect.

23. The social sciences and literary studies should provide an opportunity to emphasize cultural identity and free expression of the personality in a context of collective solidarity.

F. Learning

24. Instead of having prefabricated syllabuses thrust upon them, the users (learners) should be associated in the preparation of the content of their studies, so that their needs and their points of view may be taken into consideration.

25. Development is tending to assimilate and simplify fundamental concepts. Accordingly, the content of an all-round education should be organized with a view to the integration, simplification and mutual reinforcement of the various branches of knowledge.

26. With a view to making more rational use of educational resources, basic training objectives for schooling might be established, and the mass media (press, radio, television, etc.) might be used to supply extra information that the school cannot provide. To achieve this, the school must show young people how to analyse and use information, and must develop their ability to work independently, with a view to lifelong education.

27. Change is a natural part of progress. The school should prepare young people to master it so as to overcome fear and to reduce the generation gap. We need to work out a real pedagogy of change, and to explore the avenues of creativity, artistic creation, communication, productive work and technological innovation.

28. Closer attention should be paid to pupils' participation in experimental and practical activities and in the use of audio-visual apparatus, and their ability to recognize and assess the value of the various materials should be developed.

29. The importance of knowledge that is open or sensitive to the context should be emphasized, and the ability to place information in its context should be developed.

30. The presentation of the facts, particularly in school textbooks, should include not only an account of what is known, but also information about what is as yet obscure or unproved, so that young people acquire an interest in contributing to the development of knowledge.

31. In order to develop techniques for exploring facts and situations actually found in the world and seeking out sources of information, and to foster the ability to select relevant information for the solution of problems and set out the known facts, perception of logical structures should be stimulated by teaching the concepts of logic and mathematics and the techniques of modelling, the manipulation of algorithms and natural or artificial languages. Mathematical linguistics, for example, has taught us that there are "grammars" in other branches of science.

32. The possibility of changing the systems used for assessing pupils' knowledge should be examined, with a view to integrating assessment of performance and assessment of effort.

G. Specific proposals

33. At the national level, encouragement should be given to the establishment of centres to supply a new type of educational resources, including both general information materials and teaching materials; these would serve as a link between the sources of information and the users. In general, encouragement should continue to be given to the establishment of regional centres for the exchange and joint production of audio-visual materials.

34. School textbooks should, as a rule, be shorter, easier to consult and cheaper. They should be written by multidisciplinary teams, which should include specialists in each discipline, educators and communication specialists.

35. In certain fields, Unesco should consider the advisability of producing reference documents (manuals or audio-visual material) which might serve as models for the preparation of materials for the various countries' education systems.

36. The initial and further training of teachers, together with their preparation for new roles, is still one of the most pressing tasks in every country. In particular, educational personnel should be shown how to evaluate and use the new media; they should be equipped to understand educational research and participate in it; and they should be given information about the methods and purposes of vocational guidance.

37. Unesco should support the development in Member States of research centres for curriculum reform, whose role would be to give advice on how educational content and teaching methods should be developed, to contribute to the elaboration of new teaching materials and to promote initial and further training centres for teachers and other educational personnel.

38. Unesco should support the research and development activities mentioned above and contribute to their internationalization by increasing the numbers of co-operative programmes and stepping up the circulation of information on such activities among specialized institutions. In particular, it should take the initiative in convening, at regular intervals, more broadly based interdisciplinary international conferences on future studies concerning educational content.

II. REPORT OF THE SYMPOSIUM

A. Background and objectives

1. Background

1. In conformity with the decisions taken at the twentieth session of the General Conference, Unesco organized from 7 to 11 July 1980, an international symposium bringing together leading personalities in the scientific and cultural spheres and eminent educators for the purpose of examining desirable trends in the content of general education over the next two decades.

2. This decision was based upon an awareness of the rapid scientific, economic and social development which has characterized the last decades, a concern that education be truly democratized and that henceforward it be designed to be lifelong, comprehensive and complete, and a growing resolve to anticipate and control the future of society. All of these factors have progressively made the question of educational content the focus of the preoccupations of the Member States. Officials responsible for educational policies, educators, the young, their parents and all those involved in economic life desire a content ever more pertinent, coherent and better balanced. Numerous reforms have been outlined and often implemented as is indicated in the replies to a survey questionnaire addressed to educational research institutes in Member States, the results of which constituted the basis for the working document "Contribution to a study on the evolution of the content of general education (1970-1980)" prepared for this symposium.

3. For its part, the United Nations Educational, Scientific and Cultural Organization had for many years co-operated in this effort. The Organization began by striving for the improvement and spread of those strategies and organizational and overall reform methods most likely to assist in resolving the often acute problems bound up with the transformation of school curricula. These activities include such important expert meetings and general symposia as: the expert meeting in Moscow on the content of general education (January 1968); the expert meeting on educational content in the context of lifelong education (Paris, October 1975); the meeting on methodology for the reform of school curricula (Paris, December 1976); and the meeting of experts on the co-ordination of the content of pre-university education in school with that of post-secondary education in Europe (Paris, June 1978).

4. A number of important Unesco publications have sought to contribute to this movement, notably the compendium entitled "Programmes d'études et éducation permanante" (Unesco, 1979, 369 p.); "La régulation dans les systèmes éducatifs" by L. D'Hainaut (1980, 369 p.); "Basic services for children: a continuing search for learning priorities" (Unesco-Unicef, 1978, vols, I and II, 240 and 229 p.). The Unesco Institute for Education in Hamburg has contributed to the effort through the publication of such works as "Curriculum evaluation for lifelong education" by R. Skager and R.R. Dave (1978), "Curriculum integration and lifelong education" by J.B. Ingram (1979) and "School curriculum in the context of lifelong education" by U. Hameyer (1979). (Annex V contains the selective bibliography of documents and publications on educational content edited by Unesco (1975-1980).)

5. In other respects, the Organization is concerned with the improvement of most of the specific content of the various subjects: physical and natural science teaching, technical and vocational education, introduction of productive work in education, the development of education for international understanding, physical education, aesthetic education, moral education, environment and population education, etc. All these fields have been covered through studies, expert meetings, information seminars and publications in co-operation with competent non-governmental organizations.

6. Finally, the Organization has striven to facilitate the evolution of educational programmes in Member States by helping to strengthen their national capacities as regards the testing, elaboration and evaluation of such content through the dispatch of consultants, the organization of training seminars and improved documentation. Particular mention should be made here of the activity of the regional systems for educational innovation for development in Asia, Africa and south-east Europe, as well as of the organization of major training seminars of national specialists such as the African regional seminars on the elaboration and evaluation of school curricula in Achimota, Ghana (July-August 1975) and in Dakar (October-November 1975).

2. Objectives of the symposium

7. The following objectives were placed before the symposium:

to study the current situation and the main new trends as regards pre-university general education programmes;

to lay down the general outline for the desirable evolution of general education content over the next two decades;

to promote an approach to the content of general education that will be more comprehensive and pertinent than heretofore;

to encourage thinking at the national and international level concerning the consequences of the structural evolution of knowledge and to contribute to the promotion of better interdisciplinarity, integration and co-ordination of the content of all-round education.

8. The ultimate aim of the symposium was therefore to facilitate the transition from present-day content to a content geared to the beginning of the twenty-first century, and contribute to an evolution of educational programmes that would make them:

more pertinent with respect to the needs of each national community and to the demands of the international community;

more coherent and better interlinked;

better balanced from an internal point of view and taking into account the actual time that each child can devote to his education;

based on the principle of interdisciplinarity that takes into account scientific advances, the demands of the world of work and of socio-political life;

more flexible and more adaptable to the changes that have occurred or are going to occur.

9. Planned in the context of a very broadly based interdisciplinarity, the symposium called upon specialists in widely differing realms invited by the Director-General of Unesco to make their personal contribution to the study of the evolution in the content of general education. Most of them were asked to reply to a brief questionnaire covering the general lines of the evolution of educational content over the next two decades.

10. The questionnaire covered the following five points:

1. What developments do you expect over the next two decades and to what extent do you feel that these developments are going to influence the

evolution of the content of general education or should be taken into consideration in the elaboration of said content?

2. In your opinion, which paths should be followed in order to reduce the gaps between school and life? What must be suppressed or reduced in the programmes? What must be modified in them or added to them? How is balance to be achieved?

3. In your opinion, what will be the most important problem or problems to be solved with regard to the content of education over the next two decades?

4. Do you think that the systematic revision of education content could influence societies of the twenty-first century?

5. If you had the possibility of being associated with international thinking on the evolution of the content of education looking ahead to the twenty-first century, what themes would you like to see taken up?

11. The 32 specialists who answered Unesco's invitation were representatives of the different fields concerned (philosophy, letters, psychology, sociology, futurology, history, economics, mathematics, physics, biology, to cite only a few of those represented) as well as of the principal trends in the educational sciences. The principal non-governmental organizations active in the field of future studies or educational content had also been invited to send observers.

12. It was intended that the symposium would give them an opportunity to examine, in the light of their differing professional experiences, the changes that have taken place in educational content over the past ten years, as well as to give their opinion as to what they feel to be the desirable orientation for educational content in the forthcoming 20 years, taking into account economic, social and cultural development, scientific and technological advances, the spread of new communication technologies and the necessity to protect the cultural identity of peoples, and to outline the role that Unesco might play in that evolution.

13. In order to reduce the difficulties due to the fact that certain concepts have different connotations from one language and educational tradition to another, it was announced that for the purposes of its discussions the symposium would adopt the following definitions:

Future studies on education

In contrast with forecasting, future studies are the methodical investigation of the future starting from an approach that favours change and newness while avoiding, unlike futurology, a break between the past and the future. In the field of education, future studies thus identify those facts that are portents of the future and that, while often imperceptible, are capable of having profound and extensive repercussions on present trends; such studies thereby serve to point out the already existing divergences between educational content and the development of societies.

All-round education

All-round education is a new concept and one that is broader than that of general education. It is proposed by way of a single concept capable of encompassing all educational activities - in school and out of school, systematic or non-formal - from nursery school to pre-university level, except for those slanted towards vocational training.

Educational content and school programmes

Subject-matter, educational programmes, curriculum, syllabuses, curriculum development.

Educational content covers the totality of knowledge, know-how, values, attitudes and behaviour patterns conveyed and transmitted by the educational institution or during out-of-school activities. It should be borne in mind that the concept of educational content covers both taught content, in other words, that forming part of an explicit programme, and latent content offered by school life, teacher-pupil relations, work experience and the totality of the "oral" written and audio-visual messages encountered by pupils.

At different stages of schooling, the school programmes determine the subjects to be taught and the establishment of the teaching time for each subject as well as the list of content to be acquired, in other words, the required knowledge. The programmes generally take the form of administrative texts. A "curriculum" is the organization of learning, in a particular discipline or at a given level. The purpose of the curriculum is to define the objectives of learning, educational content, and the methods and the materials to be employed. In the past, the term "syllabus" was used to designate an instrument which served as a means for the educational institution to define the teaching content (the programme) and its practical organization from the standpoint of learning (what we now call the curriculum). The term "methodology of the elaboration of educational content", or curriculum development, designates a set of principles, methods and techniques used for the selection and organization of education content.

B. Preparation and organization of the symposium

14. In order to offer a frame of reference for the symposium, the Unesco Secretariat prepared two studies, one dealing with trends in the content of general education over the last decade and the other on the socio-economic context of the development of content over the next two decades. A third study on forecasting methods applied to education has been prepared under contract by the World Future Studies Federation.

15. In addition, to stimulate the discussions, a number of specialists had been asked to study trends in the content of education in the light of the probable evolution of certain fields of study or human activities considered to be particularly significant. Seven documents had accordingly been made available to the participants so that they could be drawn on in the discussions:

(1) Impact of the media on the content of general education in the light of developments. Pierre Schaeffer, France.

(2) The impact of the evolution of exact sciences on the curricula during the next decades. Mircea Malitza, Ana-Maria Sandi, Barcu Chitimia, Romania.

(3) The impact of the evolution of technology on the content of general education in the USSR in the course of the next two decades. A. Koukhartchouk (USSR).

(4) Probable developments in the social sciences and their consequences for educational content. Harold Shane, United States of America.

(5) On the probable development of the arts and all contemporary forms of visual expression. E. Fulchignoni, Italy.

(6) General education in India: a search for relevance. B.V. Doshi, India.

(7) Probable developments in the content of pre-university education and teacher education in the next two decades. A. Drubay, International Federation of Secondary Teachers, France.

A synopsis of these documents is appended.

16. The symposium was opened by Mr F. Mayor, Deputy Director-General of Unesco, who delivered a welcoming address, in which he stated the objectives of the meeting and the results that Unesco expected from it (see Annex III).

Dr V.K.R.V. Rao (India) was unanimously elected Chairman, and Mr Ph. Blamont (France) and Mr A. Baguniya (Uganda) were elected Rapporteurs.

17. Having drawn attention to the importance of our action in the present as well as in the future - for it is what we do here and now that will influence education in the twenty-first century - Mr Rao warned participants not to take too materialistic a view of education. A human being is not merely a producer or a researcher, or one who dominates the environment. First and foremost, he must gain mastery of himself. Spiritual values, brotherhood, human dignity and peace are as important as scientific ability, technical progress and material prosperity.

Mr Rao said that he hoped that the international symposium would formulate practical recommendations for the introduction of a kind of general education that would not only be appropriate for the twenty-first century, but could also have an impact on the twenty-first century immediately.

18. They symposium examined the following themes, either presented in written papers, or discussed at round-table meetings:

(a) General education as a preparation for community, social and cultural life and for interdependence and international solidarity, especially as regards the following:

the current divergences;

what contents aid in the search for a better quality of life (intellectual discipline, emotional development, physical development, aesthetic development, community life)?

the role and the importance of a grounding in the social sciences at different levels (sociology, anthropology, political economy, etc.);

how to prepare the young for participation in the development of the community, the nation and mankind?

Moderator: Mr Peter Heintz (Switzerland)

Animators: Mr Carlos Mallmann (Argentina); Mr Julian Marias (Spain); Mr Hicham Nachabi (Lebanon); Dr Setijadi (Indonesia); Mr Ota Sulc (Czechoslovakia)

(b) The role of general education in the preparation for professional life and the world of work, and especially:

the divergences between the contents of traditional teaching and the demands of the world of work;

education for creation and production;

science, general technology and vocational training;

the latent educational content of work experience and the contributions of work to educational experience;

educational content and training for geographical and professional mobility.

Moderator: Dr V.K.R.V. Rao (India)

Animators: Mr J.E. Arrayed (Bahrain); Mr Philippe Blamont (France); Mrs Colette Houeto (Benin); Mrs Esmine Jones (Jamaica); Mr Vladimir Topentcharov (Bulgaria)

(c) The effects of the acceleration of knowledge and the transformation of the means of information and of stocking or disseminating knowledge on the content and methods of general education, for example:

the opposition between encyclopedism and learning to learn;

criteria for selecting (and rejecting) content;

evaluation of pertinence;

training for written, oral and audio-visual (or social) communication;

training for production and the utilization of information and the importance of data-processing;

preparation for mobility and change (educability).

Moderator: Mr Georges Marx (Hungary)

Animators: Mr Ali Boussid (Algeria); Mr Amara Fofana (Guinea); Mr Rakin Mohammed Saeed (Pakistan); Mr Mircea Malitza (Romania); Mrs Josepha Vasquez (Mexico)

(d) The role of the content of general education in the equalization of opportunities and its relationship to the democratization of societies, in such fields as:

individual and collective interests, aspirations and needs;

preparation for participation and decision-making in society;

latent content (school life, teacher-pupil relationship, examinations and tests, etc.);

specialization or general training (ability and knowledge);

mother tongue and vehicular language;

cultural identity and universal values.

Moderator: Mr E. Yoloye (Nigeria)

Animators: Mr Louis Dabire (Upper Volta); Mr Danilo Dolci (Italy); Mr Ha The Ngu (Viet Nam); Mrs Annika Takala (Finland)

(e) Balance, coherence and distribution of content:

balance between technical and scientific disciplines and the literary, social, historical and aesthetic disciplines;

multidisciplinarity and interdisciplinarity;

balance between cognitive and non-cognitive training;

efforts to achieve and maintain coherence;

content as the responsibility of the school and as the responsibility of other educational agents (families, associations, performing arts, media, etc.);

the balance between initial training and lifelong training and its repercussions on the content of initial training.

Moderator: Mrs Ruth de Almea (Venezuela);

Animators: Mr Norman Henchy (Canada); Mr Youssef Idris (Egypt); Mr P.M. Nsingui-Barros (Angola); Mr Zhang Tianen (China); Professor Miguel Varela (Cuba); Mr A. Baguniya (Uganda)

(f) The foreseeable evolution of basic sciences over the next 20 years and the consequences for the content of general education was the subject of a paper read by Professor Denis Osborne (United Kingdom), which was followed by a general discussion on:

the relation between science and society: utilitarian and non-utilitarian aspects;

integrated science teaching; importance of the concepts of probability and calculation;

role of anticipation and confidence in science teaching;

the language of science: verbal and mathematical;

background materials for teaching in science centres.

Chairman: Professor Coulomb (France)

Rapporteur: Mrs L.A. Macvicar (United States of America).

C. Summary of proceedings

19. Two major preoccupations dominated the discussions. The first was the development of knowledge, whose growth has outstripped all expectations, together with the rapidity of technological advances. These phenomena are very unevenly distributed

between developed and developing countries, so that the question arises whether the development of education is not dividing the world into two camps whose reconciliation is becoming more and more difficult.

The second preoccupation arose from the constraints on the evolution of education which have recently come into being. World population growth will probably have attained 58 per cent by the year 2000, of which 20 per cent will be in the developed countries and 73 per cent in the developing countries. For schools, this means that enrolments will increase considerably and, as a consequence, so will expenditure (trebling in Africa and doubling in South America). Since in the past few years the growth of resources earmarked for education has declined considerably in a number of countries, everything possible must be done to ensure that funds set aside for education are used with maximum efficiency. Other constraints of an economic, social or political nature, such as food problems, slower growth in many fields, price rises, underemployment and the decline of international aid, which are all interconnected, will have direct or indirect repercussions on problems of schooling and education in general.

20. In this context, which is at once demographic, economic, political and cultural, the symposium attempted to answer a number of fundamental questions:

Who determines the content of general or specialized education as it will be in the year 2000?

Who should be involved in the development of curricula for the year 2000?

What major trends are likely in the evolution of content?

21. The discussions revealed the participants' deep-seated desire to assert the unity of knowledge in the diversity of cultures, their agreement in principle on what man can be expected to be like in the twentieth century, and the relative convergence of their views on the role of an all-round education. The participants stressed, however, that various paths could be chosen. Some speakers thought that an all-round education was provided almost entirely by the schools; others took the view that education was largely acquired outside the school. Nobody, however, denied that the school would continue to perform a crucial function in society. Many reforms of education systems carried out in recent years, especially in the developing countries, were described, especially those which had endeavoured to combine formal and non-formal methods, school and non-school education, rejecting methods, content and structures imposed from outside and seeking an authentic style of national education.

22. The discussions centred on the increasingly rapid growth of knowledge and on adaptation to change. How can one acquire the ability to cope with the information explosion, advances in technology and the evolution of science that is shaking the foundations of the twentieth-century world?

The school is experiencing difficulties in keeping up with the pace of the development that has accompanied the scientific revolution, now several decades old. It was stressed that there are limits to the constant overloading of general education curricula. We are in danger of sacrificing innovation, creative work, leisure, sport and, in general, training in how to achieve happiness and develop a well-balanced personality. In the years to come, we must try to determine which components of all this content are useful and necessary for the acquisition of knowledge and provide the best preparation for living in a world characterized by changing techniques and the development of information and communication media. In general, priority should be given to material that will develop the ability to anticipate and innovate - qualities essential both for survival in a world as yet unfamiliar and for making that world a more human place.

23. In striking a balance among the various subjects, account should be taken of the objectives and priorities of each society, and cognitive and non-cognitive teaching should be balanced. The organization of content, and especially the introduction of certain subjects into general education (art, physical education, sport and manual activities), and also that of local cultures were discussed. Content should be divided up so as to take account more fully of the ages and abilities of the pupils and of the cultural identity of each individual.

24. Participants discussed interdisciplinarity on several occasions; they emphasized that the subjects taught should be more effectively integrated with centres of interest and with individual or collective investigation (on water, energy, climate, food, etc.). They sought to draw a clearer distinction between multidisciplinarity and interdisciplinarity, and opposed the present juxtaposition of disciplines. Since socio-economic and political conditions play a major part in the choice of content and in the curriculum development of any given region, broader participation by parents and by representatives of local communities was recommended in the discussions on curricula and content.

25. The question of the language of instruction and the teaching of foreign languages was raised several times, and it was agreed that the pupils' mother tongue should be taught during their early years of schooling and a language of international communication subsequently.

26. It was observed that science and technology are occupying an increasingly prominent place in general education, a situation unlike that of the beginning of the century. The aim today is not to accumulate information, but to master procedures and methods by which new facts can be discovered, selected and used. Science teaching should be more directly linked with everyday life and the environment; it should not be virtually sealed off from the other disciplines, as in the past, and in particular it should include a grounding in the history of science.

27. Many participants emphasized the need not only to continue but to revitalize the teaching of values. Mention was made of the importance of hard work, loyalty, responsibility, justice and other values. It was also suggested that general education might include values which had never been taught specifically before, such as character-building, with all its implications. It was even suggested that instruction might be given in the art of parenthood and in handling emotional relationships. In considering what the content of all-round education should be, the quality of life, health, freedom and respect for basic rights should also be taken into account. These values are inseparable from the outlook on life that will be developed in the child.

28. Lastly, the participants suggested that Unesco should help to set up research centres on curriculum reform which could give advice on educational policies and on the content and methods of education, and that it should contribute to the preparation of inexpensive experimental materials, help set up workshops and organize seminars for trainee teachers or teachers in service, in order to make them more aware of their role as agents of change and innovation.

29. Special attention was paid to the role of the school in preparing pupils for employment and the world of work. Many pupils are discouraged from taking up occupations that require manual skills because of prejudice against manual labour and the insignificant position allotted to it in general education. The participants agreed that it was to be hoped that in future the structures of all-round education could link the world of the school and the world of work, and that educational action would bridge the gap between manual work and intellectual work and conquer prejudice against manual labour.

30. Opinions were divided as to the introduction of productive work into general education. While interesting experiments have been carried out in this field, it should not be forgotten that pedagogical objectives are of paramount importance at this level of general education.

In any case, those concerned by such problems - parents, workers and pupils - should always be given a chance to participate in the taking of decisions designed to encourage new relations between general education and employment.

31. On the subject of equality of opportunity and the democratization of education, the conclusion reached was that the main causes of inequality in education have to do with the pupil's socio-economic status, place of residence, ethnic group, religion, sex and material circumstances. Whether instruction is given in the mother tongue or in a foreign language could also be a determining factor.

32. The participants stressed that the media and audio-visual methods could do much to improve equality of opportunity, in particular by making it possible for pupils to fill gaps in their knowledge (in the case of those whose schooling had been incomplete or disrupted), and by providing retraining or further training in other cases; but they also pointed out that this kind of lifelong education could lead to fresh inequalities, for often those who have profited most fully from their initial training are the very ones who are able to make the most of continuing education.

33. The role of educational staff also came under scrutiny; professional educators could no longer expect or claim a monopoly in the education of young people. Areas of responsibility for education should be more clearly defined and more equitably shared between the school and other establishments that also served an educational purpose (family, youth movements, community, church, party, the media, etc.). At the same time, the initial and in-service training of teachers should be improved so as to prepare them for the important roles they will have to play - in some cases, roles new to the profession - in making education more alive and participating in research and in the taking and application of decisions.

34. In conclusion, the participants considered whether all-round education and its task - to give pupils some understanding of the various fields of knowledge - might undergo radical changes in the years to come. To cope with the increasing volume of information, the sources of knowledge must be used sensibly so as to meet man's specific needs. A general education should give the pupil abilities and teach him methods which will enable him to undertake investigations and make discoveries, to use his knowledge and to find out new facts. Therefore, when curricula for the forthcoming decades are being drawn up, instead of listing specific subjects to be studied an "overall strategy" should be worked out, taking into consideration both the diversity of needs and the desirability of making more effective use of the media and supporting structures for the retraining of teachers such as vocational centres, information systems, publications and libraries.

35. Several participants, in particular scientists, dwelt on the need to avoid confusing the information explosion, which is the outcome of industrial and technological development, with the development of knowledge. The production of knowledge seems likely to lead increasingly to the integration and simplification of learning. Working out the educational content of general education, therefore, is primarily a matter of organizing, cutting down and interrelating it with a view to such integration and simplification. But the future of the world's societies depends also on the search for fundamental values and on their definition - or redefinition - and promotion through the education of young people. In the phrase of one of the participants, it is primarily a matter of "educating the person, not the technician in the person".

36. The new idea of all-round education, which is intended to encompass the formal and the non-formal aspects of education in a single term, should be universally recognized. While acknowledging this, the participants pointed out that educational action has its limitations. It cannot discharge all responsibilities at once. Care should be taken to ensure that in future the content of formal education is more clearly defined and better integrated, while other forces in society - the family, the media and young people's organizations - should share responsiblity for certain educational tasks with the school.

37. The idea of educating pupils for a changing future should be central to all thinking on the subject. Adjusting to change is no longer enough. Education, in all its forms, should enable pupils to foresee change, so that they can influence its direction and control it.

38. On the last day, the two rapporteurs gave an account of the proceedings of the symposium, one of them dealing with formal education and the other with non-formal education, and invited discussion on what they considered to be the main points emerging from the debates. They expressed the conviction that education at the present day is facing an unprecedented challenge: how to cope with the quantitative and qualitative development of education, the information explosion, the countless scientific discoveries and the increasing demands of social and vocational life. Men and women should therefore be educated in such a way that they can control that situation in all its complexity. An interdisciplinary approach to general education curricula should therefore be adopted, and curricula should be based on the principles of world peace, brotherhood among peoples and individuals, and tolerance; they should cover the problems of the world's resources and their use, development and equitable distribution; and they should give pupils a knowledge of information and informatics.

39. In his closing speech, Mr S. Tanguiane, Assistant Director-General for Education, thanked the participants for their contributions to the proceedings of the symposium. He said that the proceedings would undoubtedly have long-term implications for the future of education throughout the world, and would do much to support Unesco s action (Annex IV).

40. All the materials produced as a result of this symposium - the preparatory studies, the contributions of participants and the debates - will be widely circulated in the immediate future, for they will be included in No. 4/1980 of the review Prospects, and will appear subsequently in the form of a publication on future studies in the content of general education, to be issued in the course of the next financial period. They will be used at regional or subregional training workshops organized by Unesco for specialists in curriculum development in Africa, Asia and the Pacific, and Latin America and the Caribbean, during the 1981-1983 period. The purpose of the workshops will be to continue, in greater detail, the general discussion on the balance, cohesion and relevance of educational content that has been initiated at this symposium, so as to encourage the development of such content in the light of the requirements of the world of work, advances in science and technology and the cultural environment, while at the same time giving due weight to national and local needs.

The results of this symposium will take their place in the broader studies that the Organization is to carry out on future developments in education, to be submitted to the International Conference on Education at its 38th session in Geneva in November 1981.

ANNEX I

Synopsis of the main preparatory documents

1. Contribution to a study on the evolution of the content of general education (1970-1980) by J. Majault, Deputy Director of the National Institute for Pedagogic Research, France (39 pages).

Constants and variations in the structures and content of education. The basic subjects: mother tongue, foreign languages, mathematics, natural sciences, human sciences, art and music, physical education.

New trends: interest in the world of work; interdisciplinarity. Conclusions: evolution of education in the developed countries: reintroduction of the importance of work into teaching; lifelong education. In the developing countries: difficulties in devising a type of education suited to local needs; rural exodus; cultural identity.

2. Some comments on the socio-economic context of development and its influence on the evolution of the content of education during the next two decades, by S. Rassekh, International Institute of Educational Planning.

A "crisis approach" based on a forecast of considerable imbalances which create a number of constraints, demographic, social, economic, financial, political and administrative.

Need to transform mentalities, change structures (non-formal education), modify content and prepare for a better social order. Many tables appended.

3. Impact of the media on the content of general education in the light of developments, by Pierre Schaeffer, former Director of the French Radio and Television Organization (ORTF) (31 pages).

A civilization crisis. The media society in conflict with the society of knowledge, and the parallel school as a challenge to traditional schooling. Will the computerized system replace man? Will it bring knowledge closer to power?

Problem of curricula and content. For whom? For what?

There will be two conflicting trends: the micro-centres of information (radio, television, etc.) and the mega-systems of satellites.

4. The impact of the evolution of exact sciences on the curricula during the next decades, by Mircea Malitza, Ana-Maria Sandi, Barbu Chitimia, University of Bucharest, Romania (29 pages).

The evolution of sciences in forthcoming decades and its impact on curricula: mathematics and informatics, physics, chemistry and related fields, lifelong education and integrated science teaching, non-formal education and teacher education, need to introduce science ethics.

5. The impact of the evolution of technology on the content of general education in the course of the next two decades in the USSR, by Aida Koukhartchouk, University of Byelorussia, Minsk (25 pages).

Historical notes on the scientific and technological revolution. Influence of automation and of scientific progress on human labour.

The evolution of education: syllabuses and methods; tests and examinations. Education at work: polytechnical education; vocational guidance; vocational and technical education; evening classes and extramural schools.

6. Probable developments in the social sciences and their consequences for educational content: 1980-2000, by Harold G. Shane and M.B. Tabler of the University of Indiana, U.S.A. (35 pages).

Brief review of the preceding decade, characterized by a growing mistrust of established institutions. Gloomy outlook for the coming decades in the social sciences, economics, sociology and anthropology. Much work must be done by the school between 1980 and 2000, in particular on the problems of equality of opportunity, the status of women, the contribution of the media, interdisciplinarity, etc.

7. On the probable development of the arts and all contemporary forms of visual expression, by Enrico Fulchignoni, of the University of Paris-Sorbonne (14 pages).

Art made its entry into education in the nineteenth century and popularization in the twentieth century, with the discovery of mechanical means of reproduction. Desacralization of art; industrial design. Need for museographical education to train the judgement through direct contact with works of art. Reprography can contribute to this, as can the cinema, although certain risks are involved. The author thinks that research should be carried out on the twofold introduction to the art of the film and art through the film, with the production of films to be used for art education.

8. General education in India: a search for relevance, by V.B. Doshi, Director of the Vastu-Shilpa Foundation, Ahmedabad, India (24 pages).

Age-old traditions. Basic education proposed by Gandhi overthrown by a colonial type of education. Conflict between town and country aggravated by urban education.

New objectives: rural reconstruction; adapting education to the world in which the individual must live; "learning through living". Introducing science and technology and integrating them into basic education; developing creativity; "learning by doing". Linking the development of education with community organization.

9. Probable developments in the content of pre-university education and teacher education in the next two decades, by A. Drubay, Secretary-General of the International Federation of Secondary Teachers, Saint-Germain-en-Laye (37 pages).

Expected development: increase in specialization; dominance of certain groups, encouraged by social complexity; conflict between ease of communication and cultural identity.

Consequences: young people anxious, bewildered, protesting against society and turning away from it.

Education in the future can be planned only in a context of continuity, and must meet the twofold demand for more thorough knowledge and interconnections.

Teacher education: initial: knowledge, professional training, practical experience; in-service training: receptiveness to the development of knowledge and methods, establishment of further training centres at university level, relations between research and practice.

ANNEX II

List of documents distributed

WORKING DOCUMENTS

ED-80/CONF.803/1	Programme
ED-80/CONF.803/2	List of documents distributed
ED-80/CONF.803/3	Introductory document
ED-80/CONF.803/4	Contribution to a study on the evolution of content in general education (1970-1980)
ED-80/CONF.803/5	Summaries of studies on the evolution of content in education
ED-80/CONF.803/6	Some comments on the socio-economic context of development and its influence on the evolution of content of education during the next two decades

INFORMATION DOCUMENTS

ED-80/CONF.803/INF.1	Practical information
ED-80/CONF.803/INF.2	List of participants and observers
ED-80/CONF.803/INF.3	Bio-data of participants
ED-80/CONF.803/INF.4	Programme of round tables
ED-80/CONF.803/INF.5	Selective bibliography of documents and publications for educational content elaborated by Unesco (1975-1980)
ED-80/CONF.803/INF.6	Opening speech by the Deputy Director-General
ED-80/CONF.803/INF.7	Information study 6: "General education in India - a search for relevance" by B.V. Doshi, Director, Vastu-Shilpa Foundation for Studies and Research in Environmental Design, Ahmedabad, India
ED-80/CONF.803/INF.8	Information study 7: "Développement probable des contenus de l'éducation pré-universitaire et formation des enseignants pendant les deux décennies à venir" by André Drubay, Secretary-General, International Federation of Secondary Teachers, Saint-Germain-en-Laye, France
ED-80/CONF.803/INF.9	Information study 5: "Le développement probable des arts et des autres formes contemporaines de l'expression visuelle et des contenus de l'éducation" by E. Fulchignoni of the University of Paris-Sorbonne

ED-80/CONF.803/INF.10	Information study 3: "The impact of the evolution of technology on the content of general education in the course of the next two decades", by Mrs A. Koukhartchouk of the University of Bylorussia, Minsk
ED-80/CONF.803/INF.11	Information study 2: "The impact of the evolution of exact sciences on the curricula during the next decades" by Mircea Malitza, Ana-Maria Sandi and Barcu Chitimia of the University of Bucharest
ED-80/CONF.803/INF.12	Information study 1: "Incidence des moyens d'information sur les contenus de l'éducation générale (compte tenu des évolutions)" by Pierre Schaeffer, former Director of the Research Service for the former Office of French Radio and Television (ORTF)
ED-80/CONF.803/INF.13	Information study 4: "Probable developments in the social sciences and their consequences for educational content: 1980-2000" by Harold Shane of the University of Indiana
ED-80/CONF.803/INF.14	Information study 8: "Educational forecasting methodologies, state of the art, trends and highlights", by Barclay Hudson and James Bruno of the University of California at Los Angeles; study prepared for the World Future Studies Foundation, Rome, Italy

ANNEX III

Address by Mr Federico Mayor, Deputy Director-General

Ladies and gentlemen,

On behalf of the Director-General of Unesco and on my own behalf, I am happy to welcome you and to open this Symposium on the Evolution of the Content of General Education over the next Two Decades.

I should like to express our gratitude to you, specialists from the most varied backgrounds, for agreeing to take part in this debate on the future of education, notwithstanding your other important professional obligations. By inviting you to this Symposium, the Director-General wished to obtain a personal contribution from you to the current international discussion about the future of education and to have your views on how the content of general education should be shaped over the next 20 years so as to narrow the gap that too often exists between education and the progress of knowledge, and between the profound changes taking place in various societies and the expectations of individual human beings.

Meetings like this make it possible for Unesco to achieve its purpose of promoting international intellectual co-operation and the exchange of information, experience and ideas on the major problems of our time, and it can thus contribute to foreseeing and to fostering the future of mankind and so help to fashion a better world in which mankind's great ideals might become an everyday reality. Education plays a major part in the building of tomorrow's world, and it has always been one of the responsibilities of our Organization to study what paths could be opened up for the progress of education in rapidly developing societies. It suffices to mention in this connection the work done by the International Commission on the Development of Education, which was set up by the Organization, and its report entitled Learning to Be, for it to be clear what steadfast efforts have been made by Unesco in this field since it came into being some 30 years ago.

You are called upon today to give thought to what the evolution of general education should be over the next two decades. You know that in all countries, general education provides the foundation for the development of the individual and, for that very reason, it will contribute to shaping the world of tomorrow. A child entering school today will be an active citizen until the middle of the twenty-first century. The Symposium is an expression of what the Secretariat is doing to bring education into line with the rapid scientific, economic and social advances characteristic of our time, looking ahead to a genuine democratization of education now seen as a lifelong, global and comprehensive process.

The growing desire to foresee and control the future of our world has gradually brought the question of the content of education to the forefront of the concerns of Member States. In response to the wishes of educational policy-makers, educationists, young people, parents and everyone involved in economic life, a large number of reforms have already been adumbrated, and in many cases carried out, as shown by the answers to the questionnaire sent to the educational research institutes of Member States. The answers to that questionnaire in fact provided the material for the working document of this Symposium entitled "Contribution to a study on the evolution of the content of general education (1970-1980)".

I ask you, therefore, to consider the changes that have occurred in the content of education over the past ten years and to give your candid opinions - since you are participating in this Symposium in a personal capacity - on the way in which you feel the content of general education should go, bearing in

mind the different socio-economic and cultural factors, the rapid progress of science and technology, the growing role of the communication media and, last but not least, the urgent need to preserve people's cultural identity.

Your discussion of this issue, during which you will draw on the wealth of your varied experience, should provide pointers to ways in which general education can be made more relevant, more consistent and better adapted; more relevant to the needs of each national community and to the demands of the international community; more consistent, i.e. with clearer links between the different subjects and a better balance within those subjects, following an interdisciplinary approach which makes allowance for scientific developments, manpower and production requirements and socio-political activities; and last, better adapted and more adaptable to future world changes. It will not, of course, be possible for you to discuss all the issues relating to the evolution of the content of general education, however important certain aspects may seem. Nor will it be possible to examine during the next five days the specific problems connected with the methods of curriculum preparation, or the problems relating to educational structures and the organization of the education system. May I therefore ask you to turn your attention to the main trends in the evolution of educational content and to the interaction of the different subjects. We hope that the Symposium will make it possible to arrive at an integrated series of general pointers to the ways in which the content of education should develop and to possible improvements in this field; to explore the prospects of determined action to develop the content of education locally and nationally, and to explore what kind of concerted international action can be taken in these fields; and to provide practical ideas for Unesco's short- and medium-term programming. An institution which did not make constant efforts to align its action on the situation as it actually is would indeed be unable to help shape the future and would be an institution in decline.

Given the complexity of the problems which you have to consider, the Secretariat has selected material and proposed a series of themes which will be tackled either in the form of statements or at round table meetings. The last day will be devoted to a general discussion covering all the points raised and to the adoption of a report which will be prepared by a drafting group composed of the rapporteurs of the various round tables.

These round tables have been designed to establish a dialogue between their members and the participants as a whole. Each of you will have the opportunity to take part in one of the round tables, and the arrangements which we propose take account of the wishes you have expressed and of geographical distribution too, so that a better exchange of ideas can be achieved.

In the introductory document you will find under each theme a number of items proposed by the Secretariat for discussion. These items are only pointers, and the leaders and members of the round tables may add to them at will.

A sixth theme, "The foreseeable evolution of the basic sciences in the next 20 years and its repercussions on the content of education" will be the subject of a debate to be preceded by a talk given by Professor Denis Osborne of the Overseas Development Administration of Great Britain and the Physics and Astronomy Department of the University College of London.

The documents which you have received have been prepared as a frame of reference for the Symposium. They will be introduced and commented on this morning by specialists from the Organization and will provide, throughout your

discussions, reference points vital for an objective and well-informed analysis on which to base specific, practical and realistic conclusions.

The information documents you have received have been prepared by leading specialists, and I have pleasure here in welcoming their authors, who have agreed to be with us for this week. While not being submitted for detailed consideration, the purpose of these documents is to throw light on points considered to be particularly important.

Ladies and gentlemen,

To quote a favourite idea of Anatole France, the art of teaching is primarily that of awakening students' curiosity. Today there are so many ways of attracting their attention out of school that the manner of transmitting knowledge, the method, which, etymologically speaking, means the "approach to", is as vitally important as the content. Whatever his previous training, it is in the schoolroom that the teacher must daily re-create the method most suited to his audience, that is to say which will give the content of the message its full force. A lifelong learner, the schoolmaster deserves the title of "master" only if he is capable of this continuing effort of imagination and renewal.

I realize, ladies and gentlemen, that your judgements will be most discriminating and relevant but I should also like to invite you to seek an overall balance, which will probably involve both rejecting certain traditional ideas and introducing constructive innovations. To help us in defining guidelines for future action, you will no doubt wish to find answers to these questions which appear to me fundamental for the general education of the future: What balances should we strike between science and ethics? between school and life? between working hours and leisure? between the need for knowledge which can be shared by all, and specific cultural and social questions? What kind of equilibrium should be instituted between the work of handing on knowledge, and innovation? between specialization and the pursuit of excellence on the one hand, and, on the other, the democratization of access to knowledge?

I wish you every success in this work, and have pleasure in declaring open this International Symposium on the Evolution of the Content of General Education over the next Two Decades.

ANNEX IV

Closing address by the
Assistant Director-General for Education

Mr Chairman, ladies and gentlemen,

You have now come to the end of your labours, and I should like first of all to convey to you the Director-General's thanks for your response to his invitation to take part in this symposium, the purpose of which was to obtain a broader spectrum of views on one of the crucial problems of the development and the future of education, and to make an informed contribution to the future studies that are being carried out within the framework of Unesco and to some extent throughout the world.

I think I can say that the symposium has attained its objective, thanks to the quality of your participation and the wealth of experience and opinions that you have generously shared with one another and with us.

This symposium has been attended by 32 participants from all regions of the world and by observers from some 20 intergovernmental and non-governmental organizations.

It is the first major activity that Unesco has organized in connection with the action that the General Conference decided to take with a view to stimulating thought and research on the future development of education. And it was natural that it should deal with an area whose fundamental importance for society and for the individual is universally acknowledged.

One could probably say that the problem of educational content is a perennial one, but it has certainly never before arisen so acutely as today. For advances and the acquisition of new knowledge, particularly in science and technology, together with socio-economic changes, have never before been so rapid as they are today. Never has the cultural and human dimension of development had such importance as it has today. Never in the past have so many people been directly involved in the educational process, and never has mankind's determination that everyone, without distinction, should receive an education been as unmistakable or as firm as it is today. And never have societies and individuals expected as much from education as they do in the world of today.

This means that the role of education has never been as great as it is now; it means, too, that the relevance of its content to the world of today - but also, I wish to stress, to the world of tomorrow - has never been as crucial as it is now, if education is to be capable of discharging the greater role it must play.

For educational content must be open to the future. This has not always been the case. And I wish to congratulate you on adopting a resolutely forward-looking stance, while not losing sight of mankind's heritage, the heritage of your peoples and of your countries.

This symposium has helped to clarify a number of important ideas. You have accepted and made wide use of the idea of all-round education, which aims to encompass within one definition the formal and non-formal aspects of education, and you have sought to make it a dynamic and evolving concept. You have also been

concerned to point out the limitations of the effect that educational action can have on the future. Education cannot do everything. You have recommended that those concerned should in future seek to define the content of education more clearly and integrate it more effectively, and you have urged that it should be recognized that other forces in society - apart from education proper - have joint responsibility with the school for certain educational tasks.

In this connection, you have mentioned the family, the media and youth organizations. You have also emphasized that the development of knowledge should not be confused with the information explosion that is concomitant with industrial and technological development. You have asserted that this development of knowledge is leading in the direction of integration and simplification, and that developing educational content is first and foremost a matter of organizing, pruning and adjusting it and subjecting it to more searching scrutiny. The idea of bringing about change has been at the heart of your discussions. Adapting to change, you have said, is not enough today. We must foresee change, so that we can influence its direction and gain control of it. You have asked that the Organization should go further into this crucial pedagogical question. You have emphasized the attention that should be given to language and to all communication processes, and you have stressed the need to protect and consolidate the cultural identity of developing countries and of minorities, in order to develop a truly all-round education which will effectively meet the needs of both individuals and societies. Lastly, your desire to make recommendations on methods - by which I mean conceptualization, modelling and algorithms - of a kind that will facilitate the transfer and dissemination of knowledge among countries of unequal development will help to promote the intellectual, cultural and scientific development of all countries.

As your task nears its conclusion, I should like to say how happy we have been to have you all with us here and how much we have appreciated the contribution that you have made to the intellectual labours of the Organization, its Member States and the international educational community. I cannot end these remarks, Mr Chairman, before you close the meeting, without thanking all the participants and expressing our gratitude for your participation, for the time you have spent and the effort you have made to formulate a number of guidelines that will be of great value to the Organization, both in its current work and in future activities with a view to defining its Medium-Term Plan, which is to be adopted by the General Conference in three years' time. The symposium in which you have participated will therefore have long-term implications, and we welcome the contribution that you have thus made to the Organization's effort to draw up its programme in the light of the needs of Member States and their aspirations for a better future for mankind.

Nor can I end these remarks without thanking you, Mr Chairman, and also Mr Rao, who unfortunately was not able to attend the meeting today, as well as the moderators, the rapporteurs and all those who have done extremely important work, some of it behind the scenes, work without which the symposium could not have been brought to the successful conclusion that it has reached today. Allow me to wish you a safe return journey to your own countries and to express the hope that you may continue to maintain the contact that in the past few days you have established with Unesco and among yourselves, so that the cause of education may be advanced, thanks to our united efforts.

ANNEXE V

BIBLIOGRAPHIE SELECTIVE
des documents et publications en matière de contenus éducatifs élaborés par l'Unesco

(1975-1980)

Introduction

Cette bibliographie sélective, élaborée par le Secrétariat à l'intention des participants au "Colloque international sur l'évolution des contenus de l'éducation générale au cours des deux prochaines décennies", présente un choix de documents, d'études et de conférences, qui reflètent les activités des différents secteurs de l'Unesco, ayant trait aux contenus de l'éducation. Les titres précédés d'un astérisque sont des publications parues aux presses de l'Unesco.

Les critères de sélection ont été ceux de l'actualité et de la pertinence des documents, par rapport aux contenus de l'enseignement primaire et secondaire. Les sujets traités sont les suivants:

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I - CURRICULUM DEVELOPMENT / ELABORATION DES PROGRAMMES

A. Aims and objectives / Finalités et objectifs

1. International Conference on Education, 35th, Geneva, 1975. Final report. 14 Nov. 1975. 59 p. (ED/MD/38) Eng., Ara., Fre., Spa.

2. International Conference on Education, 36th, Geneva, 1977. Final report. Dec. 1977. 69 p. Includes recommendation (ED/MD/47) Eng., Ara., Fre., Rus., Spa.

3. International Conference on Education, 37th, Geneva, 1979. Final report. Nov. 1979. 95 p. (ED/MD/57) Eng., Ara., Fre., Rus., Spa.

5. Conference of Ministers of Education of African Member States, Lagos. Final report. 14 June 1976. 98 p. (ED/MD/41) Eng., Fre., Rus., Spa.

6. Regional Conference of Ministers of Education and Ministers responsible for Economic Planning in the Arab States, 4th, Abu-Dhabi, 1977. Final report. Apr. 1977. 82 p. (ED/MD/50) Eng., Ara., Fre.

7. Regional Conference of Ministers of Education and those responsible for Economic Planning in Asia and Oceania, 4th, Colombo, 1978. Final report. Oct. 1978. 110 p. (ED/MD/53) Eng., Fre., Rus.

8. Goals and theories of education in Asia. Regional workshop. New Delhi, India, 15-21 January 1980. Report. Bangkok, Unesco: Regional Office for Education in Asia, 1980. 151 p.

9. Third Conference of Ministers of Education of Member States of the Europe Region, Sofia, 12-21 June 1980. Education in the Europe region: trends and future outlook. (ED-80/MINEDEUROPE/3) Eng., Fre., Spa.

10. Regional Conference of Ministers of Education and those responsible for Economic Planning of Member States in Latin America and the Caribbean, Mexico City. 4-13 Dec. 1979. Final report, March 1980. 85 p. (ED/MD/58) Eng., Fre., Spa.

B. Methodology / Méthodologie

11. African Regional Seminar for advanced training in systematic curriculum development and evaluation. Achimota, Ghana, 14 July - 15 August 1975. Report. Unesco: International Institute for Educational Planning. 166 p. Eng.

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13. Regional Seminar on lifelong education, the curriculum and basis learning needs, Chiangmai, Thailand, 7-15 June 1976. Final report. Bangkok, Unesco: Regional Office for Education in Asia, 1976. 30 p.

14. Sub-regional Curriculum Workshop. Colombo, Sri-Lanka, 1-30 October 1976. Curriculum for development: analysis and review of processes, products and outcomes. Final report. Bangkok, Unesco: Regional Office for Education in Asia, 1976. 86 p.

15. Regional meeting of experts on new approaches to education of children of pre-school age. Bangkok, 1978. Final report. Bangkok, Unesco : Regional Office for Education in Asia and Oceania. 1978. 64 p.

16. Reunion Européenne d'experts sur les modalités d'apprentissage en autodidaxie. Paris, 16-19 octobre 1979. Rapport final et recommandations. Paris, 1980. 213 p. (ED-80/WS/48)

17. Seminario taller sobre desarrollo del currículo y tecnologia educativa. Córdoba, Argentina, 19-30 de noviembre de 1979. Santiago, Unesco : Oficina Regional de Educación de la Unesco para la América Latina y el Caribe. Infor Informe final. 26 p.

18. Meeting of experts on the basic cycle of study. Paris, Unesco House, 24-29 June 1974. Final report. 9 p. (ED-74/CONF.622/5) Eng., Fre., Spa.

19. Meeting of experts on the content of education in the context of lifelong education. Paris 20-25 October 1975. Final report, 1976. 8 p. (ED-75/CONF.609/COL.6) Eng., Fre., Spa.

20. Meeting of experts on the methodology of curriculum reform. Paris, Unesco, 6-11 Dec. 1976. Final report 14 p. (ED-76/CONF.640/12/Rev.) Eng., Fre.

21. Expert committee meeting on the coordination of the content of pre-university education at school with that of post-secondary education in Europe, Paris 1978. Final report. 18 p. (ED-78/CONF.611/COL.5) Eng., Fre.

22. *A systems approach to teaching and learning procedures: a guide for educators in developing countries. Paris 1975. 141 p. Eng., Fre., Spa.

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26. *Educational reforms: experiences and prospects. Paris, 1979. 232 p. (Education on the move)

27. Granjon, Anne. La réforme éducative dans le primaire et le secondaire dans cinq pays européens: France, Grande Bretagne, Allemagne de l'Ouest, Allemagne de l'Est et URSS depuis les années 70. Paris, 1978. 53 p.

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31. *Programmes d'études et éducation permanente. Paris, 1979. 369 p. (L'éducation en devenir)

32. *Skager, R. and al. Curriculum evaluation for lifelong education. Oxford, published for the Unesco International Institute for Educational Planning by Pergamon Press, 1977. 140 p.

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C. Lifelong education / Education permanente

35. Meeting on pre-school education as the first phase of lifelong education. Paris 1976. Final report. 12 p. (ED-76/CONF.608/COL.9) Eng., Fre., Spa.

36. Symposium on the contribution of persons other than teacher to educational activities in the perspective of lifelong education. Unesco, Paris, 13-17 Sep. 1976. Report Paris 23 Sept. 1976. 9 p. (ED-76/CONF.811/5) Eng., Fre., Spa.

37. Symposium on the content and methods of education to meet the needs of groups and collectivities in the perspective of lifelong education. Caracas, 7-11 Nov. 1977. Final report, Paris 29 May 1978. 11 p. (ED-77/CONF.612/COL.4) Eng., Fre., Spa.

38. Beraho-Beri, Ignace. La mise en oeuvre de l'éducation permanente dans divers états membres de l'Unesco. Une enquête auprès des Commissions nationales. Paris. Avril 1979. 126 p. (ED-79/WS/37)

39. *Cropley, A.J. Lifelong education... a psychological analysis. Oxford, published for the Unesco Institute of Education by Pergamon Press, 1977, 196 p.

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II. LANGUAGE TEACHING / ENSEIGNEMENT DES LANGUES

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48. Colloque sur les problèmes de la scolarisation en langue maternelle dans une sous-région d'Afrique. Dakar, Bureau Régional pour l'Education en Afrique, 14-18 juin 1976. Rapport final, Paris 1976. 10 p.

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50. Mother tongue education. The West African experience. By A. Bamgbose ed. London, published for the Hodder and Stoughton, 1976. 154 p. Eng., Fre.

51. Nikiema, Robert. The linguistic situation in Upper Volta : theoretical and applied research on the national languages. Paris, 1980. 34 p. Eng., Fre.

52. Taiwo, C.O. The mother tongue as a means of promoting equal acces to education in Nigeria : problems and solutions. Paris, 1976. 37 p. (ED/WS/29) Eng., Fre.

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B. Foreign languages / Langues étrangères

54. Colloque sur la coordination de la recherche linguistique en vue de son application à l'enseignement relatif aux langues africaines d'intercommunication régionale. Ouagadougou, Haute-Volta, 11-15 Sept. 1978. Rapport final. Paris, 1979. 11 p. Eng., Fre.

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57. Intégration des langues africaines dans une politique d'enseignement. Par M. Houis et R. Bole Richard. Paris, Unesco et Agence de Coopération culturelle et technique. Juin 1977. 72 p.

58 Malmberg, Bertil. L'enseignement des langues moins enseignés en Europe. Paris, 1980. 32 p. (ED-80/WS/13)

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III. MATHEMATICS / MATHEMATIQUES

61. Los módulos en la enseñanza y el aprendizaje de la matemática en la escuela secundaria. Paris, Montevideo, Oficina Regional de Ciencia y Tecnología para América Latina y el Caribe. 1978. 265 p.

62. Martyn Cundy, H. The Caribbean mathematics project : Training the teacher as the agent of reform. International Bureau of Education. Experiments and innovations in education, No. 32. 72 p.

63. New trends in mathematics teaching. Vol. 4. Paris, 1979. 280 p. Eng., Fre., Spa.

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71. Regional expert meeting. Preparation of a teacher's sourcebook on innovative techniques for learning teaching of biology in Africa. Monrovia, (Liberia), 10-14 Dec. 1979. Report, Dakar, Bureau Regional pour l'éducation en Afrique, 1979. 18 p.

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B. Physic / Physique

75. * Tendances nouvelles de l'enseignement de la physique, 3 vol., 1965-1976.

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85. Report and guide for a learning aid project in nutrition. Paris, 1976. 52 p. (ED-76/WS/3)

86. Three project reports on the "testing of Unesco nutrition education curriculum planning and evaluation guides": Ghana, Jamaica, Philippines (1976-1977) Paris, 1978. 120 p. (ED-78/WS/62)

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92. * Abraham, J. H. Les problèmes mondiaux à l'école : le rôle des Nations Unies. Paris, 1973. 250 p.

93. * Aguessy, H., Ashish M. and al. Time and philosophies. Paris, 1977. 256 p. (At the crossroads of cultures)

94. * Balogun, O. and al. Introduction à la culture africaine. Paris, 1977. 34 p. (Coll. 10-18)

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96. * Learning about interdependence. Prospects. Vol. IX, No. 2, 1979. pp. 161-223

97. * Ribes, B. Biology and ethics. Paris, 1978. 202 p.

98. The cultural content of education. Etude en commun No. 9. Paris, May 1979. (Cultural co-operation studies and experiences) (CC/78/WS/22) Eng., Fre.

A. History and Geography / Histoire et géographie

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100. *Ki Zerbo, J. Histoire générale de l'Afrique. Méthodologie et préhistoire africaine. Vol. 1. Paris, Jeune Afrique; stock. Unesco, 1980. 893 p.

101. *Teitelbaum, A. El papel de la educación ambiental en América Latina. Paris, 1978. 120 p.

B. International Understanding / Compréhension internationale

102. International Meeting of experts on the role of social studies in education for peace and respect for human rights. Kellogg Center, Michigan State University, East Lansing, Michigan, USA. 23-29 May 1976. Report, Paris, 22 Oct. 1976. 26 p. (ED-76/CONF.631/COL.5) Eng., Fre.

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104. *Education for international understanding. Annotated bibliography. Bulletin of the IBE. Educational Documentation and Information, n° 197, 4th quarter 1975. 51 p. Eng., Fre.

105. International understanding at school. Unesco associated schools project. Nos. 32, 35, 36. Paris, 1978.

106. *Some suggestions on teaching about human rights. Paris, 1978. 155 p. (first ed. 1968) Eng., Fre.

C. Population education / Education en matière de population

107. Regional consultative seminar. Future Directions of Population education. Manila, Philippines, 14-21 August 1978. Report. Bangkok, Regional Office for Education in Asia and Oceania, 1978. 176 p.

108. Séminaire régional sur l'éducation en matière de population et la réforme de l'éducation en Afrique. Dakar, 30 août-4 septembre 1976. Rapport final. Dakar, 1976. var. pag.

109. Seminario Regional sobre Programación de Educación en Población. Santiago, 25 de marzo - 5 de abril de 1974. Informe final. Santiago, Oficina Regional de Educación de la Unesco para América Latina y el Caribe, 1974. 65 p.

110. *Population Education : a contemporary concern. Paris, 1978. 120 p. (Studies and Documents N° 28) Eng., Fre., Spa.

111. Population education in Asia : a source book. Bangkok. Regional Office for Education in Asia, 1975. 349 p.

112. Training Manual in Population Education. Population education Programme Service. Bangkok, Regional Office for Education in Asia, 1978. 73 p.

113. Socio-Cultural Case Studies for Population Education. Fundamental Concepts and Methodology. Research outline. Paris, 1978. var. pag.

D. Environmental education / Education pour l'environnement

Intergovernmental Conference on environmental education. Tbilisi (USSR), 12-14 October 1977. (Eng., Ara., Fre., Rus., Spa.):

114. - Education and the challenge of environmental problems. Paris, 1977. 57 p. (UNESCO/ENVED 4)

115. - International programme in environmental education. Paris, 1977. 20 p. (UNESCO/ENVED 5)

116. - Needs and priorities in environmental : an international survey. Paris, 1977. 20 p. (UNESCO/ENVED 6)

117. - Regional meetings of experts on environmental education. A synthetic report. Paris, 1977. 28 p. (UNESCO/ENVED/7)

118. - United Nations environmental programme and its contribution to the development of environmental education and training. Paris, 1977. 40 p. (UNEP/ENVED 9)

119. - Final report. Paris, 1978. 101 p. (ED/MD/49)

120. The international workshop on environmental education. Belgrade, 13-22 Oct. 1975. Final report. Paris, 1976. 60 p.

121. Regional meeting of experts on environmental education in Africa, Brazzaville (People's Rep. of the Congo), 11-16 Sept. 1976. Final report. 54 p.

122. Regional meeting of experts on environmental education in Asia, Bangkok (Thailand), 15-20 Nov. 1976. Final report. Paris, Unesco, 1977. 70 p.

123. Regional meeting of experts on environmental education in Latin America and the Caribbean, Bogota, Colombia, 24-30 nov. 1976. Final report. Paris, 1977. 53 p.

124. Regional meeting of experts on environmental education in Europe, Helsinki (Finland), 27-31 Jan. 1977. Final report. Paris, 1977. 61 p.

125. *World trends in environmental education. Annotated bibliography. Bulletin of the IBE, n° 200, 3rd quarter 1976. 77 p. Eng., Fre.

VI. ART EDUCATION / L'EDUCATION ARTISTIQUE

126. Réunion d'experts sur la place et les fonctions de l'éducation esthétique dans l'enseignement général. Unesco, 2-7 décembre 1974. Rapport final. Paris, février 1975. 10 p. (ED-74/CONF.644/COL.8) Eng., Fre.

127. *Aesthetic education. Annotated bibliography. Bulletin of the IBE. Educational Documentation and Information, n° 208, 3rd quarter 1978. 84 p. Eng., Fre.

128. Breton, Alain et Sylvie. Ouverture de l'école aux ressources culturelles et artistiques au Guatemala. Paris, 1979. 88 p. (ED-79/WS/90) Fre., Spa.

129. Duvignaud, Jean. L'éducation esthétique à l'école et hors l'école. Résultats d'une enquête. Paris, 1980. var. pag. (ED-80/WS/88)

130. Esthétique et identité nationale, par A. Yerodia. Paris, 12 novembre 1974 (ED-74/CONF.644/4.) Eng., Fre.

131. *Le Musée et l'enfant. Museum. Vol. XXI, No. 3 1979. 216 p. ill. Eng., Fre.

132. Massa, Diabate. La mise en valeur du patrimoine culturel et artistique national comme moyen éducatif. Paris, mai 1979. 46 p. (ED-79/WS/39).

133. *Museums and children. By Ulla Keding Olofsson, General Editor. Paris, Unesco, 1979. 179 p. (Monographs on education) Eng., Fre.

134. Otero de Sabogal, R. La educación y su relación con la enseñanza escolar. Paris, Marzo de 1979. 99 p. (ED-79/WS/150)

135. Trends in aesthetic education : integration and finalities. By Dr. Edwin Ziegfeld. Paris, 28 October 1974. 22 p. (ED-74/CONF.644/3.) Eng., Fre.

136. Yerodia, A. L'Art á l'école africaine. Synthèse d'une enquête menée dans dix-huit pays francophones d'Afrique en 1977. Paris, 1979. 22 p. bibl. (ED/79/WS/33)

VII. PHYSICAL EDUCATION / L'EDUCATION PHYSIQUE

International Conference of Ministers and Senior Officials responsible for physical education and sport (first). Unesco, 5-10 April 1976 :

137. - The rôle of physical education and sport in the education of youth in context of life-long education. Paris, 1976. 37 p. (ED-76/CONF. 205/COL.4) Eng., Fre., Rus., Spa.

138. - Final report. Paris, 1976. 63 p. (ED/MD/43) Eng., Fre., Rus., Spa.

139. Interim intergovernmental Committee for physical education and sport. Unesco, 4- 13 July 1977 (first session); 28-30 May 1978 (second session):

140. - General report 1977-1978. Paris, 1978. 96 p. (ED/MD/52) Eng., Fre., Rus., Spa.

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